

# The MMST System Information Bulletin

April 1998

## NEW YORK CITY IMPLEMENTS PLAN TO TRACK POTENTIAL BIOLOGICAL AGENT USE

We're all faced with the challenge of staying one step ahead of a potential adversary. If that adversary chooses to employ a biological agent, the task becomes more of a challenge. Biological agents are difficult to detect, and they have an incubation period, which can further delay detection and identification.

Taking a proactive approach to enhance the city's level of readiness, New York City Mayor, The Honorable Rudolph Giuliani has directed the implementation of a plan to track Emergency Medical Services (EMS) calls and health trends throughout the city.

As the action office for implementation, the Mayor's Office of Emergency Management collects on a daily basis four citywide health indicators that gauge the general health of the city's residents. They include the following:

- The total number of calls for services that the Bureau of EMS receives.
- The total number of deaths reported by the Office of the Chief Medical Examiner (OCME).
- The total number of cases accepted for investigation by the OCME.
- The total number of admissions to NYC operated hospitals.

By developing a baseline for each indicator over time, spikes in any of the indicators will be noticed almost immediately. The value of defining the baseline for these statistics, when combined with the ability to rapidly track deviations, becomes obvious in terms of the ability to identify, assess, and respond quickly to a potential biological event.

For additional information regarding specific details of the NYC plan, please contact:

The New York City Mayor's Office of Emergency Management  
Mr. William Nagle  
(212) 788-1429

## ENVIRONMENTAL PROTECTION AGENCY (EPA) OFFERS GRANT MONEY

Through its Chemical Emergency Preparedness and Prevention Office (CEPPO), EPA has announced the FY 1998 Chemical Emergency Preparedness and Prevention (CEPP) Technical Assistance Grants (TAG) Program.

CEPPO's activities are based on the "Emergency Planning and Community Right-to-Know Act of 1986" (EPCRA) and Section 112® of the Clean Air Act (CAA). In 1990, Congress amended the CAA to include new provisions for the prevention of chemical accidents, which required EPA to establish a list of regulated substances and thresholds and to promulgate accident prevention regulation, including requirements for the development of Risk Management Plans (RMP).

Under the TAG program, eligible applicants include States and local government agencies that are or will be involved in RMP implementation and related responsibilities. The purpose of this year's CEPP TAG program is to help State and local agencies develop chemical accident prevention programs as well as to integrate their chemical accident prevention activities with related activities.

EPA has up to \$1 million available for cooperative agreements to States and local agencies under this year's program. States and local agencies seeking funds from EPA may request up to \$100,000 each. The program requires a minimum non-Federal match of at least 25% of the total project budget. EPA funds can be used for no more than 75% of the total cost of the project. State and local agencies are encouraged to work closely with their EPA Regional CEPP contacts in developing proposals. To allow for the possibility of neighboring States and/or local communities working together on different facets of setting up a chemical accident prevention program, EPA will accept proposals for multi-State or multi-local agency projects.

For additional information, please see the following web page address:

<http://www.epa.gov/swercepp/pubs/guide98.html>

# The MMST System Information Bulletin

## EQUIPMENT INFORMATION

The RPI Team continues to expand and strengthen its association with vendors. Several companies offering equipment of potential use to MMST System response have recently contacted us. In our effort to continue "Sharing the Knowledge," it is our pleasure to pass this new information on. You will find enclosed copies of the data we have received on several new products. As we have previously indicated, we are distributing this information to assist you in your equipment identification process; however, no recommendations or endorsements are implied.

### A Modular Approach

GIAT Industries is introducing a **new concept** in the **selection, acquisition, and packaging** of NBC Response Equipment through their "MMST/NBC Response Equipment Kit" program. The program features a "**modular approach**," which allows each MMST city to tailor a package to their individual requirements.

GIAT Industries has developed a pilot brochure entitled "First Responders NBC Intervention," which we have attached for your review. GIAT proposes that the components of their basic kit satisfy the following critical functions of an MMST response:

- Personnel Protective Equipment (PPE) for 50 MMST team members responding to an event involving WMD/NBC threat agents and/or industrial chemicals.
- Detection and identification capability for chemical warfare agents, radiological agents, and industrial chemicals.
- Decontamination capability for MMST team members and equipment.

For additional information on this program, please contact:

GIAT Industries  
Mr. Christian Sommade  
13, route de la Miniere  
78034 Versailles Cedex – France  
Voice – 011-33-1-39-49-81-02  
Fax – 011-33-1-39-49-81-06

## EQUIPMENT INFORMATION

### NBC Agent Detection and Identification

Last month we provided information on a new piece of detection equipment being developed by Environmental Technologies Group (ETG) Inc., which was initially going to be called the "Hazard Communicator." ETG has renamed the device the "APD 2000." They anticipate initial production of the APD 2000 to be in place by the end of May with full production in place by late summer. With their production efforts focused on this new instrument, ETG has informed us of their intention to discontinue production of the Chemical Agent Monitor (CAM). For additional information on the APD 2000, contact Mr. Scott Goetz at ETG Inc., (410) 321-5370.

### NBC Agent Decontamination

Modec Inc. announces the "Modular Mass Casualty Decon Unit." RPI highlighted this system prototype in our March bulletin. Based on input received from various sources within the MMST System Development program, the prototype received several product improvements and enhancements that include flow activated, pilotless ignition for the heater system, integrated power exhaust vents, and overall size reduction. The new system is scheduled for a demonstration to CBDCOM and C-BIRF on May 14 at Aberdeen, MD. For additional information, contact Mr. Brian Kalamanka at Modec Inc., (303) 286-1546.

We have received information on a product called "Decon-Check" from the Texas Research Institute (TRI) Austin, Inc. Decon-Check is a spray-on/scrub-off cleaner designed for use on decontaminable protective clothing. **Decon-Check is not a replacement for decontamination solutions for use against chemical or biological warfare agents.** The product clings to most surfaces, and its bright color shows where to scrub to ensure effective cleaning of the outer ensemble. Potential applications for this product include use in the "Personnel Decontamination Station" (PDS) at the intermediate wash point. For additional information on this product, please call Ms. Anita Blair at TRI Inc., (800) 97-DECON (800-973-3266).

# The MMST System Information Bulletin

## GENERAL INFORMATION

RPI MMST Support Team members Grant Peterson, Elmer May, and Greg Palomares attended the 1998 NDMS Conference on Lifesaving Intervention, March 28 to April 1 in Denver, CO. It was a pleasure to see so many familiar faces again. We all felt that the conference was an outstanding success and proved to be an excellent opportunity to continue "Sharing the Knowledge."

First Responders NBC Intervention  
APD 2000  
Decon-Check  
Modex Modular Mass Casualty Decon System

The International Association of Fire Chiefs, Hazardous Materials Committee is sponsoring the **"1998 International Hazardous Materials Response Teams Conference,"** June 4 to 7 in Towson, MD. Seminar topics include Hazardous Devices and Materials, which include a live demonstration of explosives and operational bomb squad equipment; agent detection; an update on "Terrorism Training Initiatives"; and "Street Level Operations at a Weapon of Mass Destruction (WMD) Incident." For additional information, please contact the conference coordinator, Ms. Alice Pottmyer, at the International Association of Fire Chiefs, (703) 273-9815, Ext. 340.

## WEB SITES OF INTEREST

### Environmental Protection Agency

<http://www.epa.gov>

### Hazardous Materials and Safety

<http://www.lib.lsu.edu/sci/chem/guides/srs103.html>

### Material Safety Data Sheets

<http://www.emergency.com/hzmtpage.html>

### National Center for Infectious Diseases/Centers for Disease Control

[http://www.cdc.gov/ncidod/id\\_links.htm](http://www.cdc.gov/ncidod/id_links.htm)

### National Institute for Occupational Safety and Health (NIOSH)

<http://www.cdc.gov/niosh>

### Nuclear Regulatory Commission

<http://www.nrc.gov>

## ENCLOSED ATTACHMENTS



# APD2000

Portable, hand-held chemical detection and monitoring is available in an ergonomic design with the APD 2000 from Environmental Technologies Group, Inc. Selectable settings allow the APD 2000 to be used as a detector which automatically clears down and resets following an alarm, or as a continuously-sampling monitor. With superior interferent resistance, the APD 2000's state-of-the-art algorithm simultaneously detects nerve and blister agents, recognizes pepper spray and mace, and identifies hazardous compounds. The APD 2000 can be powered from 6 internal alkaline or rechargeable "C" batteries, external AC sources, or 9 - 18 Vdc.



**Environmental  
Technologies  
Group, Inc.**

## FEATURES

- ▶ Detects chemical warfare agents and civilian threats such as pepper spray and mace
- ▶ Provides agent identification
- ▶ Powered by commercial alkaline or rechargeable batteries, AC, vehicle power
- ▶ Provides superior interferent resistance
- ▶ Selectable operating modes

## APD2000 OPTIONS

- ▶ Integrated radiation dosimeter
- ▶ Data logging of all detection and monitoring events
- ▶ Sample preservation
- ▶ Remote communication of alarm signals via radio frequency

## SPECIFICATIONS

### Agents Detected:

GA, GB, GD, VX, HD, HN & Lewisite (L) Pepper Spray, Mace

### Sensitivity:

V - 4 ppb	30 seconds
G - 15 ppb	30 seconds
H - 300 ppb	15 seconds
L - 200 ppb	15 seconds

High concentrations of these agents  
10 seconds

### Self test:

BUT for electronic, pneumatic and power conditions

### Operator Service:

5 minutes per 24 hours of operation

### Temperature:

Operation:	-22F to 126F
Storage:	-60F to 160F

### Size:

4" x 3 1/2" x 11" (10 x 9 x 28 cm)

### Weight:

6 pounds (<3 kg) including batteries

### Power:

6 standard or rechargeable "C" batteries, AC, or 9 to 18 Vdc

### Alarms:

Easy to read visual display and audio alarm

Chem/Bio Marketing Manager  
1400 Taylor Ave., P.O. Box 9840  
Baltimore, MD 21284-9840  
(410) 321-5370 Fax (410) 339-3123

The threat could be as big as an all out  
**chemical attack...**

...or as small as  
**pepper spray.**

Either way, the APD 2000  
(Advanced Portable Detector)  
from Environmental Technologies  
Group, Inc., offers full detection  
and monitoring capabilities.  
The first device of its kind to  
detect chemical warfare agents,  
pepper spray and mace, the  
APD 2000 was designed for both  
battlefield and civilian emergency  
first response.



## **APD2000**

- ▶ **Detects warfare agents, pepper spray and mace**
- ▶ **Selectable monitoring/detection**
- ▶ **Superior interferent resistance**



**Environmental  
Technologies  
Group, Inc.**

Chem/Bio Marketing Manager  
1400 Taylor Ave., P.O. Box 9840  
Baltimore, MD 21284-9840  
(410) 321-5370 Fax (410) 339-3123

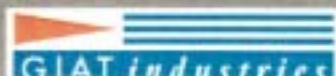


# FIRST RESPONDERS NBC INTERVENTION



METROPOLITAN MEDICAL STRIKE TEAM  
A NEW EQUIPMENT CONCEPT...

WMD TERRORISM  
MAJOR HAZMAT INCIDENT





# A GLOBAL APPROACH...

## Giat MMST NBC Package, a new approach to equip first responders ....

The MMST response concept must satisfy the following critical functions:

- Protection of the first responders
- Agent detection and identification
- Triage/Treatment
- Decon Patients
- Coordinate Patient transportation

To fulfill those functions, the MMST team can use an overall engineered approach which integrates all the required response equipment into an «operational system».

This NBC response equipment approach meets the following criteria :

- Equipment design to fulfill the different critical functions.
- User friendly, equipment easy to use.
- «NBC Mil-spec certified» in addition to other standard certifications used in Hazmat, Firefighter communities.
- Free of interface problem between equipment
- Reliable logistic applications permitting efficient storage and quick deployment at the incident site.
- Easy procurement with one Prime contractor.
- Integrated after sales support to master possession cost.

Giat Industries with its European and US partners in the NBC Defense field has developed this «MMST NBC response equipment package» to bring to first responders in USA the best technology internationally available to face the threat of WMD.

## The «Giat MMST NBC response equipment» comprehensive package includes :

Protection for 50 MMST team members including :

- 10 Hazmat technicians
- 13 EMT-Ps
- 27 specialists in the different fields of operation (Task force control, law enforcement, medical research, Hospital operations and logistics)

Detection, Protection, Decontamination functions :

- Detection facing all the following threats :  
CW agents, toxic industrial compounds, radiological materials
- Personal Protection Equipment : 3 class :  
Level A, B, C, or filtering suits regarding the missions, with SCBA or PAPR
- Polyvalent decontamination systems for personnel and equipment

■ *This proposed package is  
a modular concept which permits  
the different agencies or cities  
to customize their needs by  
the selection of the  
equipment in type and quantities  
in the kit program*

- For 10 Hazmat technicians
- For EMT-P

### Concept :

The MMST technicians team are able to select between 3 type of protection level depending on the tasks they have to fulfill during a WMD incident :

- Level A gas tight suit with SCBA (available for 10) for initial reconnaissance.
- Level B splash suit with SCBA (available for 8) for working in hot zone, after detection or identification.
- Level C/ decon suit with PAPR (available for 8) for Decon operations

The selection of the equipment in accordance to the mission gives the best ergonomics/protection ratio and enables the responders to work during an extended period of time.

### Level A Kit includes :

- 1 transportation box
  - 1 Level A M105 GT Uniscaph (Kappler) suit (ASTM Certified) with Dräger pass through (SEI certified)
  - 1 splash cover for the protection of the SCBA
  - 1 Pair of Hazmat Boots
  - 1 pair of undergloves
  - 1 active carbon underlayer garment
  - 1 safety helmet
  - 1 ILC Dover cooling vest + 2 cooling packs
- Available in 4 sizes : S, M, L, XL

MISSIONS	EQUIPMENTS	QTY
Reconnaissance	Level «A»	10
Intervention	Level «B»/«C» suit	8
Decontamination	Level «C» suit Decon	8



### SCBA open circuit Kit includes :

- 1 transportation box
- 1 Pro Air evolution 4500 PSI Dräger SCBA (Niosh certified) including :
  - Face piece (EPDM)
  - First and second stage regulator
  - Backplate and Harness assembly
  - Carbon composite cylinder and valve assembly
  - Chest mounted alarm whistle and gauge
  - pull forward waist belt
  - Auxiliary Airline connection for connection to the pass-through

Weight of the SCBA : 26 pounds



# PROTECTION



## The Kappler Uniscaph M 105 GT level A

is a chemical proof gas tight suit which provides high protection against all kind of Hazardous materials including the range of CW agents.

The Kappler multi-layer M 105 GT Uniscaph meets ASTM F 1001 and CE (European) standards.

The 2 kits (Gastight suit + SCBA) enables trained responders to work 50/60 mn in hot zone and permits the rapid change of the tank, thus extending the mission time.



ILC Dover cooling vest



Active carbon undergarment

- For 10 Hazmat technicians
- For EMT-P



**The Level B/C suits Kit includes :**

- 1 transportation box
- 8 Chemical Liquid tight limited use class C suit (ASTM F 1001 and CE std)
- 8 pairs of undergloves
- 8 pairs of butyle gloves
- Adhesive tapes for sealing gloves, boots... mixed sizes : 2 XXL, 4 XL, 2 M

**The Chemical proof boots Kit includes :**

- 1 transportation box
- 8 Hazmat type boots (Knees boot) mixed sizes: 1x9, 2x10, 3x11, 2x12

**The level «C» splash protective decon suits Kit includes :**

- 1 transportation box
- 8 Chemical Liquid tight limited use TLD suit
- 8 pairs of undergloves
- 8 pairs of butyle gloves
- 8 pairs of over-boots
- mixed sizes : 2 XXL, 4 XL, 2 M



■ *The splash protective level C/Decon suits Kits can also be fitted with active carbon underlayer, or ILC dover cooling vest included in the level A Kits to improve the comfort and/or the safety level of the responders.*

*The splash protective level C/decon suits Kits can be worn with the SCBA Kit (for level «B») or with the ensemble Arfa respirator associated with the compact air supply unit fitted with 2 Canisters (for the level «C» ensemble) depending on the missions*

# PROTECTION

## The Chemical intervention suit «M203/2K»

is a limited-use Kappler class B/C suit intended to meet the safety needs of the responders intervening in a liquid or gaseous chemical environment (organic solvents, chlorinated hydrocarbons, benzene, CW agents, etc).

Made from a light barrier material, abrasion-resistant and gas-proof, the M 203/2K has an elasticated hood suited for the wearing of a respirator (filtering or S.C.B.A.), and a sealed zip fastener protected by a flap. The suit is completed by a pair of butyle protective gloves with inner gloves.

Meets ASTM F1001 and EN standards

Size : M, XL, XXL

Weight : 1 Kg

Example of chemical resistance

- Benzene 99 % > 8 h
- Nitric acid 70 % > 24 h
- HD (10 g/m<sup>2</sup>) > 24 h
- VX (10 g/m<sup>2</sup>) > 24 h

List of chemical resistance on request

## The «light decontamination suit» (TLD)



is a limited-use suit specially developed for the decontamination's teams members. Made of light barrier material, abrasion resistant and liquid tight (gas proof). The «TLD» is made of 2 pieces (vest and trouser) to get a high comfort, the TLD has an elasticated hood suited for the ARF-C respirator.

Meets Nato standards

color : white

HD material resistance

(10g/m<sup>2</sup>) : > 24 h

VX material resistance (10

g/m<sup>2</sup>) : > 24 h

Weight : 500 g

Sizes : M, L, XL, XXL



- For other team members



### The TOM filtering suits

#### Kit includes :

- 1 TOM filtering suit, size 120
- 4 TOM filtering suits, size 112
- 2 TOM filtering suits, size 104
- 1 TOM filtering suit, size 96
- 8 pairs of NBC socks
- 8 pairs of butyl gloves
- 8 pair of inner gloves
- 1 manual for use



### The ARF-C respirators

#### Kit includes :

- 1 ARFC with hair net, size 1
- 4 ARFC with hair net, size 2
- 3 ARFC with hair net, size 3
- 1 DVSM frame, size 1
- 4 DVSM frame, size 2
- 3 DVSM frame, size 3
- 8 carrying bags
- 8 cleaning kits
- 16 A2B2E2K2P3 / NBC canisters
- 1 manual for use

### The lightweight filtering TOM suit

is the "basic protective suit" of the first responders acting within the environment of a WMD incident (NBC agents). It is the best suit for all those responders who are not directly involved in the "hot zone" where high liquid contamination represents the threat.

Based on a technology developed for military use, the TOM filtering suit offers a very high protection factor against the threat of Chem bio agents with its active carbon innerlayer. The Nomex outlayer of the TOM suit provides also a protection against liquid and flame up to a certain extent.

The TOM suit allows a very long time wear (up to 24 hours) with no more physiological constraint than a standard battledress (clo factor = 0,7), it can be worn directly on the skin and has been specially designed to be worn in hot and humid conditions.

The suit is made of a Nomex Delta C outlayer and an active carbon CL2C foam innerlayer, the Nomex is treated to protect against liquid (chemical droplets, light rain, oil etc.). The CL2C carbon foam has been tested and passed all tests under Nato & US std (US test method CRDC SOP 84010 - Test performed by Geomet Lab)

### The CASU Kit includes :

- 4 CASU air distribution units
- 4 belts and carrying straps
- 4 hoses
- 8 lithium batteries
- 16 A2B2E2K2P3 / NBC filter canisters
- 1 manual for use



- Service life : 30 days in a CW contaminated environment
- Shelf life : 10 years
- Protection time : 24 h under Nato threat assessment for CW agents (10g/m2)
- Decontaminable : No
- Delivered with active carbon socks (to be worn with Hazmat boots or leather boots) and butyle gloves.
- Can be packed and repacked under vacuum sealed bag



*The TOM suit  
with several Armies  
organisations  
France, Sweden  
Singapore  
UN Inspection*

# PROTECTION

The Giat PAPR system is the filtering positive pressure respiratory device which is used with the TOM, or level «C» suits.

## The Giat PAPR is composed of :

- 1 ARFA-C respirator
- 1 CASU (Compact air supply unit)
- 1 hose
- 1 harness & belt
- 2 filtering canisters

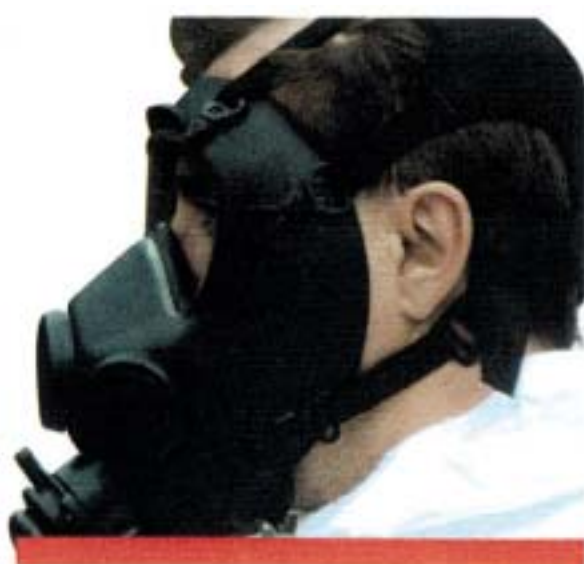


## The PAPR exists in 2 versions :

- Basic Type (Niosh approval pending) composed of one Arfa-C respirator associated with one speed Casu (115 l/min - Alkaline battery - 2 hours) fitted with 2 AB P3 canisters.
  - Advanced Type (No Niosh approval) composed of one Arfa-C respirator associated with 3 speeds Casu (60-75-90 l/min - Lithium battery - 12 h autonomy) fitted with two A2B2E2K2-P3/NBC wide spectrum canisters.
- The PAPR advanced type is in compliance with Mil spec and CE (European) standards (some are in opposition)



## The Arfa Respirator



is a full face military type respirator made of polyurethan, hardened to chemical agents .

It complies also with the CE standards. It is under process for Niosh approval.

The Arfa exists in 4 sizes to fit with an high level of tightness all type of faces (even small). It can be used with a PAPR or as negative pressure respirator with an high safety level. It is designed with a built-in voice transmitter, an anti-mist device and a net for a greater comfort. It can be fitted with different accessories : voice projection unit, eyes glasses insert, sun shield, etc...

## The Compact air supply unit

provides air to any respirator through filtering canister. The compact air supply unit is hardened against CW agents. The unit is supplied with Alkaline battery (basic version) or Lithium battery (advanced version). For the advanced version, an external power pack for training purpose can be fitted also. The unit allows 2 filter canisters to be mounted on the side. An harness and a belt makes an easy use of the Casu in different positions on the suit (on the belt, in the back or on the shoulder).

AB P3 abs A2B2E2K2P3 canisters : see technical data on page 15.

## ■ The 3 speed Casu C420

*is used by US and UK Armies and different civil defense forces worldwide.*

*The Casu C 420 meets*

*Mil Spec std.*

## AP2C detector/monitor

is a portable flame spectrophotometer which detects the presence of atoms of sulphur and phosphor in the air, by the way it detects simultaneously the presence of Nerve (GA, GB, GD, GF, VX) and Mustard (HD) agents. The AP2C provides a fast detection with a very fast cleardown, reliable (no calibration and very low maintenance needs); it is the only worldwide detector which can detect the presence of agents in vapor and liquid form thanks to its S4PE scraper.

The AP2C can be fitted with an alarm device at the back of the apparatus, it becomes a field alarm monitor with a remote control unit (optional)

The AP2C is very efficient for the following missions : Initial detection, monitoring of contaminated people or casualties before and after decontamination

## AP2C specifications



Sensitivity : 10 microgram/ m<sup>3</sup> GB,

420 microgramme/m<sup>3</sup> for HD

Response time : 2 seconds

Duration : 12 hours with one battery pack and one H2 storer

Monitor weight : 2 Kg

The AP2C can be supplied in 2 versions : standard or for use in explosive atmosphere (e version)

## AP2C Kit includes :

- 1 AP2C monitor
- 1 buzzer clip
- 1 S4PE (liquid scraper device)
- 1 S4PE case
- 2 S4PE pipes
- 4 hydrogen storers
- 10 sampling nozzle
- 2 packs of 10 sample scrapers
- 2 packs of 10 packed test scrapers
- 4 lithium battery packs
- 2 LSH 20 lithium batteries
- 1 carrying bag with belt and strap
- 1 manual for use

Alarm detection device (ADAC) optional

## CW AGENTS



■ The AP2C is in used in Civil defence forces and/or Armies of the following countries : France, Sweden, Israel.

AUTO  
DETEC

ALARM & M

MAN  
DETEC

CONFIR

SAMP

FOR IDENT

# DETECTION

## INDUSTRIAL CHEMICAL AGENTS



### MX 21 Kit

is a multi function gas detector working on the principle of the electro chemical cell. The MX 21 is able to detect 3 gas at the same time and the presence of an explosive atmosphere. The kit comprises all the necessary equipment to detect all highly industrial toxics (see list below) and maintaining the polarity of the cells.



#### Composition of the box :

- 1 MX 21 multifunction gas detector with charger
- 1 remote sampling stick
- 1 polarisation unit with charger
- 1 harness
- 8 detection cells :  
O<sub>2</sub>, CL<sub>2</sub>, NH<sub>3</sub>, SO<sub>2</sub>, H<sub>2</sub>S, HCL, HCN
- 30 cells available in option
- 1 manual for use

### Dräger tubes Kit

includes an automatic pump and 4 fast detection sets (per 5 tubes) which permits the responders to make a quick confirmation or not of the presence of agents after a positive (or negative) detection, done with the automatic apparatus (AP2C or MX 21). The kit comprises all the tubes for the different CW and toxic industrial agents. It includes also 50 individual nerve gas detector (reagents) able to be used by single responders.



#### Composition of the box :

- 1 Accuro 2000 monitor
- 1 Accuro pump
- 1 charger
- 1 spare battery
- 1 Accuro spare parts kit
- 2 test set adaptators
- 3 simultaneous test sets CW I
- 3 simultaneous test sets CW II
- 3 simultaneous test sets for five industrial agents (I) : inorganic fumes I
- 3 simultaneous test sets for five industrial agents (II) : inorganic fumes II
- 1 accessories kit
- 10 packs of 5 DETINDIV individual nerve agent
- 1 manual for use

### SAMPLING Kit

is able to take liquid, air and solid samples.



#### Composition of the box :

- 1 air pump with accessories
- 6 " Tedlar " bags
- 1 liquid pump with accessories
- 6 inertial unbreakable bottles
- 1 case for sampling return
- 2 scalpels
- 4 spatulas
- 1 pair of scissors
- 2 pairs of tweezers
- 20 forms
- 2 pens
- 1 box of cotton swabs
- 2 plastic syringes
- 5 needles
- 1 carboned foam
- 2 inviolability plugs
- 1 manual for use

# DETECTION



## The Radiological kit

allows the personnel to detect any kind of radiological contamination in the air or in liquid and to monitor population after a decon process



## Composition of the box :

- 1 DOM DOR 309E dose rate meter (alpha, beta, gamma probes)
- 2 MCB1 contamination warning unit
- 5 DMC 100 direct reading electronic dosimeter
- 1 manual for use

## The DOM DOR 309 E

is a hand held dose rate meter which is enabled to detect alpha beta and gamma radiation at a very sensitive level. It gives sound and visual

alarm with a digital display.

Energy range :

- gamma : 80 KeV to 3 MeV
- beta : > 250 KeV

Measurement range :

- adsorbed dose - 10<sup>-6</sup> to 9,999 Gy
- adsorbed dose rate - 10<sup>-6</sup> to 9,9 Gy/h

Response time < 3s

The DOM Dor 309 E is supplied with 2 external probes : alpha et beta (beta probe is supplied with telescoping rod)



## The MCB1

is a beta/gamma monitor which is a simple device based on a geiger muller counter to check the contamination of personel or population after the decon process



## The DMC 100

is an electronic dosimeter based on silicon diode which gives visual and audible alarm based on dose and dose rate.

- measurement range :
- 0,1 mrem to 999.99 mrem incremental
- 1 mrem to 99.99 mrem/h (dose rate)
- energy range 60 KeV to 3 MeV



# DECONTAMINATION

## The Decontamination shower Kit

The decon shower kit permits the decontamination of personnel wearing liquid tight suit (Level A, B or C suits type).

The decon shower kit includes a decon hoop to be used by one or two persons and a decon pool. The hoop is made of corrosion free aluminium pipes. The design concentrates water at the area being decontaminated, minimizing amount of water required for decontamination and disposal (0.3l/sec at 40 Psi).

### The Decon shower kit includes :

- one transportation box
- one decon hoop with 2 extendable handles
- one decon pool (6feet)



## The personal Decontamination kit (Spray)-Secondary decon equipment

The PIN 100 sprayer is a manual hand held sprayer made of stainless steel with 10 l capacity, a 4 m length hose and a pressure gauge.

### the Kit includes :

- one transportation box
- 2 X PIN 100 sprayer with harness
- 5 Packs of Sodium Hypochlorite Powder (15lbs)
- Manual for use

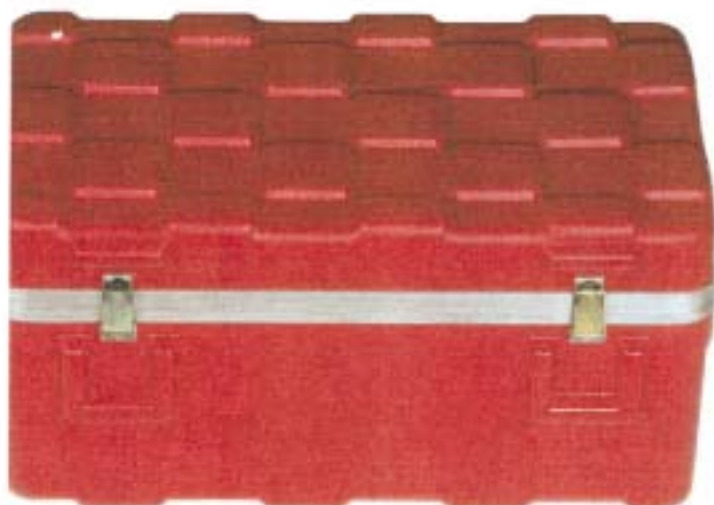


# DECONTAMINATION

## Fuller's earth Kit

The fuller's earth decon kit permits the decontamination of personnel and population contaminated by liquid agents. The fuller's earth adsorbs the toxic and the sponge glove removes the toxic before the use of shower or other decon solutions. The kit is enabled to decontaminate 100 people (150 g fuller's earth/per person).

- one transportation box
- 300 x 50 g Fuller's earth doses
- 150 sponge gloves
- Manual for use



## Miscellaneous items used for decontamination

- The following equipment is stored in 4 boxes
- 3 x Belonging bags boxes
- 4 x Cadaver bags boxes
- Paper hospital gowns

## The poly overpack drums

permits the responders to store all the contaminated equipment already conditioned in bags for further treatment.



# LOGISTIC




**The kit system develops by Giat industries presents the following characteristics :**

- Good storage conditions
- Easy to inspect
- Easy to manage
- Easy to transport
- Easy to use
- Quick to deploy on the incident site

The Kit boxes are made of « ABS » material, solid and light, with a liquid tight gasket. The boxes can be locked.



*Giat Industries meets*   
**ISO 9001 / AQAP 110**  
*quality assurance level*

**The boxes comes within 2 sizes :**

800 x 450 x 400 mm  
800 x 450 x 200 mm

Each box has its contents printed on an aluminum plate glued on the box with the logo of the user.

Optionally, Giat Industries can develop customized individual bags for the storage of responder's equipment for personnel on duty (single unit bag). The boxes can be stored in an 20 feet trailer. The packaging associated to the quality of the equipment gives a considerable «operational» advantage to the Metropolitan Medical Strike Teams



## SERVICES

To support the « NBC response equipment kit program », Giat Industries has developed training, after sales service and maintenance programs. The details of these programs and the details characteristics and specifications, test results and certifications of the equipment presented can be obtained in the « NBC response equipment kit handbook » available upon request.

### GIAT INDUSTRIES FILTER CANISTERS PERFORMANCES (BASED ON NIOSH TEST METHODS)

The Giat AB P 3 canister has a minimum service life criteria as follows :

Gas	Concentration	Flow rate	Minimum service Life
Chlorine	500 ppm	64 l/min	25 min
Carbon Tetra chloride	500 ppm	64 l/min	40 min

Pressure drop : 40 mm WG for 85 l/min

The A B P3 (CCF4) Giat canister is also Nato std approved and got R 100 Hepa filter type

The Giat A2B2E2K2P3/NBC canister has a minimum service life criteria as follows :

Gas	Concentration	Flow rate	Minimum service Life
Chlorine	5,000 ppm	64 l/min	15 min
Carbon Tetra chloride	5,000 ppm	64 l/min	25 min
Sulfur Dioxide	5,000 ppm	64 l/min	25 min
Ammonia chloride	5,000 ppm	64 l/min	40 min

Pressure drop : 60 mm WG for 85 l/min

The A2B2E2K2P3/NBC canister is certified to CE & Nato standards and uses a R 100 Hepa filter type

# MMST KIT PROGRAM PROPOSAL

DESIGNATIONS	REFERENCES	QTY
<b>Level A kits (10)</b>		
CHEMICAL GASTIGHT SUIT FOR EXTERNAL BREATHING APPARATUS KIT - (in 3 sizes)	10559664	10
SELF CONTAINED BREATHING APPARATUS KIT (1 TANK)	10559665-US	10
SPARE CYLINDER (4500PSI/60 Composite)		5
<b>Level B/C kits (8)</b>		
CHEMICAL INTERVENTION CLOTHING KIT (M203 - B/C class suits for 8)	10559666	1
LIGHT DECONTAMINATION SUIT (TLD - C Class suits) KIT (8)	10559667	1
CHEMICAL INTERVENTION BOOTS KIT - (8)	10559668	1
RESPIRATORY PROTECTION FILTER KIT - BOX 1 (8 ARFC)	10559669	1
RESPIRATORY PROTECTION FILTER KIT - BOX 2 (4 CASU)	10559671	2
ACCESSORIES KIT (8) - Box - Light helmet - Replacement Ice Pack for Cool Vest - Pairs of Silver Shield gloves	10559732	1
<b>TOM Team Members (32)</b>		
CHEMICAL INTERVENTION BOOTS KIT - (8)	59668M	4
RESPIRATORY PROTECTION FILTER KIT - BOX 1 (8 ARFC)	10559669	4
RESPIRATORY PROTECTION FILTER KIT - BOX 2 (4 CASU)	10559671	8
«LIGHTWEIGHT CARBON» «TOM» SUITS KIT (8)	10559672	4
ACCESSORIES KIT (8) - Box - Light helmet - Pairs of Silver Shield gloves -	10559732	4
<b>Detection kits</b>		
SAMPLING KIT	10559673	1
AUTOMATIC INDUSTRIAL CHEMICAL DETECTION KIT	10559676	1
DRAGER TUBES KIT	10559679	1
RADIOLOGICAL KIT	10559683	1
AP2C AUTOMATIC CHEMICAL WARFARE AGENTS MONITOR KIT	10559681	1
AP2C & ADAC MONITOR KIT	10559682	1
<b>Decontamination Equipment</b>		
PERSONAL DECONTAMINATION KIT	10560001	5
DECONTAMINATION SHOWER KIT	10559685	1
POLY OVER PACK DRUMS (95 gal)	105-PCK	5
DECONTAMINATION KIT FULLER'S EARTH	105-FULEARTH	1
DECONTAMINATION ITEMS KIT	105-DECITEM	1
<b>Ancillary Equipment</b>		
TRAILER (20H)		1
RAVEN STRETCHERS		10

Attention : some equipment shown in this brochure are submitted to export license

US distributor :

**Giati Industries :**  
a specialized company in NBC  
defense equipment.

Giati Industries designs, develops and manufactures  
NBC Defense equipment since 1918.

Giati Industries is the European leader in the field of  
NBC defense equipment for military and civil defense  
forces.



## TECHNICAL SPECIFICATIONS

**Output:** Heated Agent Decontamination Solution to Military recommended requirements for effective neutralization of CBW.

**Injection System:** Patented siphon injection system automatically delivers adjustable delivery of decon solution without mechanical means such as pumps to four positions.

**Heat Source.** Self-contained LP fired heater with on-board fuel supply. No electricity required. Comes with valving to add additional fuel tank to extend operating time.

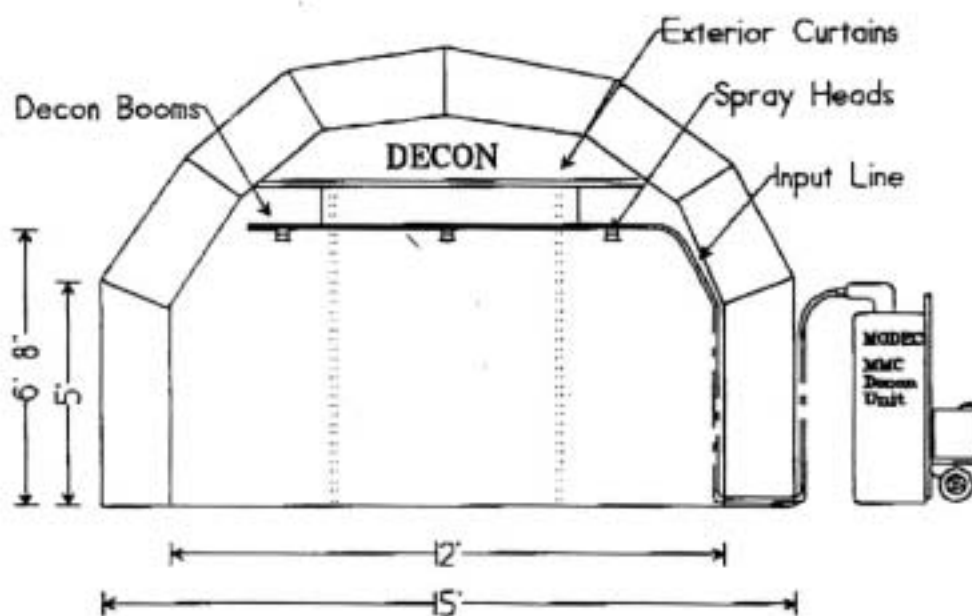
**Operations.** Can be moved and set-up by one person and activated in less than one minute. Produced of light weight aluminum, the system weighs less than 125 lbs.

**Devices.** Delivery ports and fittings are stainless steel for corrosion resistance and long operating life. Booms are stainless with quick disconnect fittings and three heads. Uses 3/4" city water or 1-1/2" fire hose; includes in-line pressure reducer.

**Shelter.** Reeves "Aireshelta" 12' x 12' x 9'. Weighs 198 lbs. and packs down to .5 cu lmt storage. Has removable flooring that can be set up berm style to contain fluids. The units can be linked, equipped with internal partitions and be securely anchored.

**Air Handling.** The Reeves Aireshelta is the only inflatable system to include internal air vents that move air from front to rear of shelter to keep vapors towards the exclusion zone as victims are processed through the this transition area. This shelter has been specifically designed to integrate with the Modec Modular Mass Casualty Decon Unit.

## Modec Modular Mass Casualty Decon System



**Modec, Inc., Denver, Colorado**

**Modular Mass Casualty Decon System Operations Data**

Output	165,000 BTU
Flow - Max	8.85 gpm - 530 gph; average 8 gpm - 480 gph.
Temperature	98 degrees - No mixing adjustment required
Ignition	Solid state electrical, no flame, ignites upon flow
Set-up time	Less than one minute: position, hook-up water, turn water valve on.
Recovery time	None, instantaneous and continuous.
Dilution rate	Max .675% (10% chlorine), adjustable by flow meter or by bleach concentration to .3 - .5% (CBD-COM recommended)
Injection methodology	Continuous jet siphon into motive flow for proportional dilution
Output Selection	All bleach, or one side fresh, one bleach, or all rinse.
Injection solution	10% bleach, other liquid soaps or decon solutions
Input line	1-1/2" NPT
Pressure reducer	Integral unit can accept up to 300 psi.
Output psi	Adjustable 75 to 125 psi.
Output Ports	3/4" dripless quick disconnect rated to 3,000 psi.
Fuel Source	On-board LP, with dual regulator for supplemental fuel tank.
Exhaust	Power vented.
Size	48" x 24" x 16", approximately 125 lbs., includes wheels; movable by one person. Extensions raise to over 7'.
Temperature	Pre-set for recommended medical temperature range (80- 100).
Boom Delivery	Optimal device utilization: 2 - 2 head booms (stainless steel) One three or four headed booms. (will operate 2 - three headed booms)
Boom extension Poles	Anodized 1-3/8" aluminum extension poles will raise booms to 7'. Will also operate single spray heads.
Options	Can operate overhead booms with side mounted boom to create "water curtain" effect.  Flow-through stainless decon brush and other sprayers.

# Miss a Spot?



## ... Not with Decon-Check™!

A scrub-on/scrub-off protective clothing cleaner



TEXAS RESEARCH INSTITUTE AUSTIN, INC.  
A Texas Research International Company  
9063 Bee Caves Road  
Austin, TX 78733-6201

### Sales Division

Tel: 1-800-973-3266

Tel: 1-512-263-2101

Fax: 1-512-263-3530

*Decon-Check™ is a scrub-on/scrub-off protective clothing cleaner that shows you where to scrub.*

- ✓ Its powerful detergents, surfactants, and emulsifiers remove surface contaminants
- ✓ Bright color shows where to scrub
- ✓ Clings to most surfaces (removes easily with gentle scrubbing).



*Spray on Decon-Check™*

*For the first time, it is possible to get a visual indication of cleaning effectiveness during decontamination procedures.*

### Decon-Check™:

- ✓ Sprays on/Scrubs off fast!
- ✓ Ready to use - No mixing required
- ✓ Works with a wide variety of protective clothing materials.
- ✓ Easy "Lock and Load" bottle replacement



*Scrub Off Contaminants*

### Your Kit includes:

- Light, rugged, high efficiency Air Powered Sprayer that uses SCBA or other compressed air source (air source not included)
- Water-fed brush head
- Four 2.2 liter bottles of Decon-Check™
- Adjustable extension handle (2-4 feet) with water control valve
- Duffle Bag
- Written Instructions
- Instructional Video
- 25' Air Hose

## Ordering Information

Part Number	Description
1000	<i>Decon-Check</i> <sup>TM</sup> Starter Kit
1100	<i>Decon-Check</i> <sup>TM</sup> Refills
Refills include four 2.2 liter (2.3 quart) bottles (enough to treat approximately eight suits)	
Optional Accessories	
Part Number	Description
1050	RHP Pressure Regulator
1200	Decon/Wild Land Manifold
Replacement Parts	
Part Number	Description
1010	Water-fed Brush Head
1020	Extension Handle (2'-4')
1030	Air Powered Sprayer
1040	Valve Assembly for air sprayer

Call our Toll Free number at 1(800)97-DECON and order today.

**Important:** Read all instructions, warnings, and limited warranties before using *Decon-Check*<sup>TM</sup> products.

Distributed by:

**When  
complete  
cleaning is  
important..**

***Decon-Check***

- Biodegradable • Non-Toxic
- Non-flammable



*Decon-Check* is ideal for  
use in Hazmat:

- Training Drills
- Incident Response
- Site Remediation
- Marine Spill Response
- Contaminated Diving Situations-Chemical/Biologic
- Equipment and Surface Decontamination





Decon-Check



TEXAS RESEARCH INSTITUTE AUSTIN, INC.  
A Texas Research International Company

### Decon Check™ Compatability Table

Acetic Acid	Epichlorohydrine	Nitrobenzene
Acetic Anydride	Ethanol	Oleum
Acetone	Ethyl Acetate	Perchloroethylene
Acetonitrile	Ethylene Glycol	Phenol
Acrylic Acid	Formaldehyde	Phenol Formaldehyde
Ammonium Hydroxide	Fuel Oil	Phosphoric Acid
Ammonium Phosphate	Furfural	Phthalate Plasticizers
Ammonium Sulfate	Gasoline	Potassium Chloride
Amyl Acetate	Glycerine	Potassium Sulfate
Amyl Alcohol	Hexane Cyclohexane	Pyridine
Aniline	Hydraulic Fluid	Sodium Acetate
Animal Oil	Hydrochloric Acid	Sodium Bisulfite
Benzene	Hydroflouric Acid	Sodium Hydroxide
1,3-Butadiene	Hydrofluosilicic Acid	Sodium Hypochlorite
Butyl Alcohol	Isooctane	Sodium Phosphate
Butyl Amine	Isopropanol	Styrene
Calcium Chloride	JP-4,5,8 Jet Fuels	Sulfuric Acid
Calcium Hydroxide	Kerosene	Transformer Oil
Calcium Hypochlorite	Linseed Oil	1,1,1-Trichlorethylene
Chloroform	Lubricating Oil	Trichloroacetic Acid
Chlorosulfonic Acid	Magnesium Chloride	Triethylamine
Corn Oil	Magnesium Hydroxide	Triethylenetetramine
Crude Oil	Methanol	Turpentine
Dichlormethane	Methyl Ethyl Ketone	Urea Formaldehyde
Diesel Fuel	Methylmethacrylate	Vegetable Oil
Diethyl Amine	Mineral Spirits	Xylene
Diethyl Ether	Monochlorobenzene	Zinc Chloride
Dimethyl Formamide	Naphtha	
Dimethyl Sulfoxide	Nitric Acid	

0136.1

Decon-Check™ is compatible with the above listed hazardous materials if used in accordance with the manufacturer's instructions. For additional information concerning non-listed materials, call TRI/Austin at (800) 973-3266.

The information above is intended only as a guide. No performance warranty is intended or implied. Decon-Check™ does not render the contaminant harmless. Waste water generated during the use of Decon-Check™ must therefore be handled as hazardous waste and treated in accordance with all federal, state, and local regulations. We make no guarantee of results and assume no obligation or liability whatsoever in connection with this information.

DECON-CHECK

Material Compatability List

MATERIAL	MANUFACTURER	QUANTITY
Challenge 5000	Unknown	9+ sq. yds.
Challenge 5800	Unknown	8+ sq. yds.
Butyl Coated Nylon fabric	Archer Rubber	None
PE Coated Tyvek	Dupont Co., Inc.	4 sq. yds.
Saranex (coated Tyvek)	Dupont Co., Inc.	5 sq. yds.
Tyvek	Dupont Co., Inc.	3 sq. yds.
Resonder	Unknown supplier (unlabeled)	3.5 sq. yds.
Defender	Lakeland, Ind.	.75 sq. ft.
Forcefield	Lakeland, Ind.	.75 sq. ft.
Interceptor	Lakeland, Ind.	.75 sq. ft.
Trelchem TLU	Trelleborg	2 sq. yds.
Trelchem VPS	Trelleborg	3 sq. yds.
Trelchem HPS	Trelleborg	3 sq. yds.
Trelchem Super	Trelleborg	small sample
Trelchem Butyl	Trelleborg	small sample
Trelchem Light	Trelleborg	small sample
Trelchem Trelfire	Trelleborg	small sample
Trelchem Trelcover	Trelleborg	small sample
CPF I	Kappler	2 sq. yds.
CPF II	Kappler	1 sq. yd.
CPF III	Kappler	3 sq. yds.
CPF IV	Kappler	4 sq. yds.
Responder	Kappler	1 sq. yd.



# Decon-Check™

## Sales Division

TEXAS RESEARCH INSTITUTE AUSTIN, INC.  
A Texas Research International Company

### Decon/Wild Land Manifold

Decon/Wild Land Manifold provides a convenient means to reduce one 1 1/2" fire hose supply line down to five 3/4", 1/4 turn ball valves. Rated at 500 psi and constructed of anodized aluminum pipe; one 1 1/2" swivel inlet with optional one 1 1/2" full port outlet valve. Applications include decontamination procedures, wild land fires, and hot spot operations.

#### Features

- Working pressure of 500 psi
- Multiple (5) hose outlets
- Swivel Inlet
- Convenient staging of decontamination zone
- Sturdy light weight construction

DWM-1200-1 1/2" inlet - (5) 3/4" ball valve outlets with 1 1/2" capped pipe plug, 7 lbs.

DWM-1210-1 1/2" inlet - (5) 3/4" ball valve outlets with 1 1/2" full port outlet ball valve, 10 lbs.



DWM-1200



DWM-1210

### Decon-Check™ Lightweight Hose

Decon-Check™ lightweight hose is a high performance, high pressure water hose with only a fraction of the weight and bulk of a conventional garden hose. A high performance polymeric encapsulation technique is used to impart superior physical properties.

#### Applications include:

- Hazmat Decontamination
- Wildland Fires
- Field Sprayer Installation
- Mop-up
- Plant Washdown

#### Specifications

Part No.	1300
Hose Size:	5/8" I.D.
Weight (50')	1 lb.
Coil Diameter (50')	9"
Operating Pressure:	300 PSI
Burst Pressure:	600 PSIG

Supplied with 3/4" Brass GHT Couplings

#### Physical Performance

- U.V. Resistant
- Fungus Resistant
- Heat Resistant
- Abrasion Resistant

#### Chemical Resistance

- Salt Water
- Detergent
- Motor Oil
- Mineral Oil
- Gasoline
- Sodium Hydroxide
- Sulfuric Acid



Lightweight Hose, Nozzle, Case

#### Accessories

Part No.	Description
1310	Storage Pouch
1320	Adjustable Spray Nozzle

**Ask our sales representatives about our other Decon products**

**Call Toll Free  
1 (800)97-DECON  
for ordering or  
technical information.**

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